

REMARKS

Applicants respectfully request reconsideration of this application as amended.

Office Action Rejections Summary

Claims 14-16 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,077,888 of Tokisue et al. ("Tokisue").

Claims 17 and 23 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of U.S. Patent No. 5,915,915 of Allen et al. ("Allen").

Claims 18 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of U.S. Patent No. 5,080,549 of Goodwin et al. ("Goodwin").

Claims 20-22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of U.S. Publication No. 2002/0025408 of Davis ("Davis") and PCT Publication No. WO9801890 of Granneman et al. ("Granneman").

Claim 24 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of U.S. Patent No. 6,696,220 of Bailey et al. ("Bailey").

Status of Claims

Claims 14-24 are pending in the application. Claims 14, 18 and 20 have been amended. The amended claims are supported by the specification. No claims have been added or canceled by this amendment.

Claim Rejections

Claims 14-16 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by Tokisue. In particular, the Office Action states:

Regarding claim 14, Tokisue et al. teach a method of mounting discs on a spindle of a magnetic disc file (reasonably interpreted to be a nest) wherein the disc (1) having a central hole is positioned over the spindle (Figure 1 and Figure 4; col. 2, lines 10-30). Tokisue et al. further teach that the disc may be guided into close proximity of the spindle by blowing air **through the edge of the central hole** of the disc so that the disc may be fitted onto the spindle in a completely non-contact manner (col. 5, lines 28-32).

(Office Action, 3/18/08, pp. 2-3)(emphasis added)

It is respectfully submitted that the Office Action has overlooked particular language appearing in claim 14 and has misinterpreted the cited passage of Tokisue. It is submitted that Tokisue is cumulative to the Thomas and Tzur references previously cited that merely disclose the passive result of air necessarily entering an inner diameter hole of a disk, as discussed in applicant's previous response. In contrast, claim 14 includes the feature of a "**directing**" gas into the inner diameter hole of a disk through a gas port "aimed toward" the inner diameter hole of the disk.

The Office Action cites to column 5, lines 28-32 of Tokisue that states:

If necessary, the supporting mechanism 2 can have a plurality of holes which blow air to the fitting portion, e.g., **the edge of** the central hole, of the disk 1 so that the disk can be fitted onto the spindle 4 in a completely non-contact manner. (col. 5, lines 28-32)(emphasis added).

It is submitted that the above cited passage of Tokisue does not teach blowing air into the central hole of the disk. Rather, the above cited passage of Tokisue teaches blowing air to "the edge" of the central hole. The above cited passage can be more readily understood by an inspection of Figure 4 of Tokisue which is reproduced below.

FIG. 4 is a schematic diagram of a vacuum furnace system. The top part shows a cross-section of a furnace chamber (2) with a central sample (2A) and a heating element (2B). The chamber is connected to a vacuum source (22) and a fluid pressure source (18). The bottom part shows a side view of the furnace assembly, including a base (5) and a support structure (4).

Application No.: 10/758,305

based on the disclosure provided therein. It is submitted that the disclosure in Tokisue does not support the conclusion reached in the Office Action. In order to serve as an anticipating reference, the reference must enable that which it is asserted to anticipate. A claimed invention cannot be anticipated by a prior art reference if the allegedly anticipatory disclosure cited as prior art is not enabled. Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education and Research, 346 F.3d 1051, 1054 (Fed. Cir. 2003). Here, it is submitted that the Office Action's interpretation of Tokisue is not enabled by the disclosure of Tokisue.

First, the stated "plurality of holes" is not shown in figure 4 or any other figure of Tokisue, nor discussed in other portions of the specification of Tokisue. As such, the exact location of "the plurality of holes" and their orientation relative to surface of the disk is unknown. Under Elan Pharmaceuticals, enablement requires that the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation. It is submitted that one of ordinary skill in the art would not be able to make "the plurality of holes which blow air to the fitting portion, e.g., **the edge** of the central hole, of the disk," in the manner postulated by the Office Action, without knowing their position or orientation with respect to the fluid supply passage 16 and the disk, among other components. Therefore, Tokisue does not serve as an anticipatory reference to claim 14 of the present application.

Moreover, claim 14 is currently being amended to recite that the gas port is "angled" to further clarify the distinction between the method of operation of claim 14 and the operation of the Tokisue system, as noted above. Therefore, it is submitted that claim 14 and its dependent claims 15-16 and 19 are patentable over Tokisue.

Claims 17 and 23 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of Allen.

Claims 17 and 23 depend from and include the limitations of claim 14 noted above. It is submitted that Allen fails to cure the deficiency of Tokisue as noted above in regards to claim 14 and, therefore, claims 17 and 23 are patentable over the combination of cited references.

Claims 18 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of Goodwin. In particular, the Office Action states:

As to claim 18, Tokisue et al. teach the method set forth above. Tokisue et al. do not expressly state that the low and positive gas pressures produce a Bernoulli effect. However, Goodwin et al. teach a method of handling a wafer/disc wherein a Bernoulli effect is created (Abstract).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Tokisue et al. and to have produced a Bernoulli effect to carry the disc, as suggested by Goodwin et al., since Goodwin et al. suggest such a method is an equivalent alternative means known in the art for creating a low and positive gas pressure that is suitable for carrying a wafer/disc.

(Office Action, 3/18/08, pp. 4-5)

It is submitted that one of ordinary skill in the art would not be motivated to combine the cited references. Goodwin teaches that with wafer handling systems other than its own, "lateral guard rails must be used and contact between the edges of the wafer and the guard rails occurs frequently and may result in unacceptable contamination or damage to the wafers." (Goodwin, col. 2, lines 16-20). In contrast, Tokisue teaches a disk handling system having a stop member 23 that is provided along the outer periphery of its disk supporting mechanism to stop the disk from moving laterally away from supporting mechanism and thereby floating off. The stop member 23 can be seen in Figure 4 of Tokisue provided above. However, it should be noted that the stop member

23 is illustrated in regards to all the embodiments described in Tokisue. Therefore, although the system of Tokisue may purport to support a disk in a “non-contacting” manner, such non-contact is only in reference to the surface of the disk or the spindle of the disk drive. Such non-contact is not with respect to the outer side edge of the disk and the supporting mechanism 2. Tokisue clearly teaches that its system requires the lateral stop member 23 to contact the outer edge of the disk secure the disk from floating off of the supporting mechanism.

Accordingly, one of ordinary skill in the art would not look to combine the teachings of Goodwin with those of Tokisue because Goodwin teaches away from the use of lateral guard rails (i.e., stop members) that contact the outer edges of the wafer because such a configuration may result in unacceptable contamination or damage to a workpiece being transported by its system.

In addition, it is submitted that it would also not be proper to modify Tokisue in with the teachings of Goodwin in order to arrive at applicant’s claim 18, because such a modification would require a substantial reconstruction and redesign of the elements in either system, as well as a change in the basic principle under which the either construction was designed to operate. In re Rattie, 270 F.2d 810 (CCPA 1959); MPEP 2143.01. As noted in applicant’s previous response, the Examiner has not provided any evidence that (1) a system designed to float a hole-less wafer could actually float a disk containing a hole because the introduction of a hole in the wafer handling system could throw off the air flow balance under which a wafer handling system was designed to operate, or (2) a system designed to float a holed disk could float a wafer without a hole because the removal of a hole (i.e., addition of material within the inner region of wafer) in a disk handling system could throw off the air flow balance under which a disk handling system was designed to operate.

For at least the reasons given above, it is submitted that claim 18 is patentable over the cited references.

Claims 20-22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of Davis and Granneman. In particular, the Office Action states:

As to claims 20-22, Tokisue et al. teach the method of claim 14 as set forth above. Tokisue et al. do not teach maintaining the gas at an elevated temperature or utilizing the contactless carrying and guiding method to nano-imprint an embossable film above the disc substrate. However, Davis teaches a method of nano-imprinting an embossable film upon a disc, such as optical, magnetic and magneto-optic discs, by heating the disc prior to placing/positioning the disc in the mold/nest (Abstract; paragraphs [0004-0006; 0009-0010; and 0072-0079] and Grannemen et al. disclose a method and apparatus for contactless heating of a substrate by directing heated gas at the substrate to both heat the substrate and to support it within the apparatus (Abstract; Figures 1 and 2).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified **the contactless carrying and guiding method of Tokisue et al.** and to have maintained the gas at an elevated temperature and to have utilized **the contactless carrying and guiding method of Tokisue et al.** to facilitate a nano-imprinting process as suggested by Davis and Granneman et al. for the purpose of realizing Tokisue et al.'s benefit of reduced contamination and disc damage in various disc processing applications such as the nano-imprinting method set forth by Davis. Further, Granneman et al. suggest the advantages of contactless heating of a substrate with gas prior to processing (page 1, lines 16-36). It would have been obvious to have employed heated air, as suggested by Granneman et al. , in the process of Tokisue et al. for the purpose of eliminating a separate heating step prior to additional processing.

(Office Action, 3/18/08, pp. 5-6)(emphasis added)

Applicant respectfully disagrees with the Office Action's characterization of the cited references. In particular, it is submitted that Tokisue does not teach a contactless carrying and guiding method. As discussed above, although the system of Tokisue may purport to support a disk in a non-contacting manner, such "non-contact" is only with

respect to the surface of the disk 1 or the spindle tip 4A of a disk drive. Such “non-contact” is not with respect to the outer side edge of the disk and the supporting mechanism 2. Tokisue clearly teaches that its system requires the lateral stop member 23 to contact the outer edge of the disk to secure the disk from floating off of the supporting mechanism. As such, the disk handling and transport system of Tokisue could not be used as a contactless heating system as purported by the Office Action. Accordingly, the proposed combination of references would impermissibly render at least one of the cited references unsatisfactory for its intended purpose and, therefore, there is no suggestion or motivation to make the proposed combination to render claim 20 obvious over the cited references. See MPEP 2143.01; In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

Therefore, it is submitted that claim 20, and its dependent claims 21 and 22, are patentable over the cited references.

Claim 24 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tokisue, as applied to claims 14-16 and 19 above, in view of Bailey. Claim 24 depends from and includes the limitations of claim 14. It is submitted that Bailey fails to cure the deficiencies with respect to the limitations of claim 14 and, therefore, claim 24 is patentable over the cited references.

In conclusion, applicants respectfully submit that in view of the arguments set forth herein, the applicable rejections have been overcome.

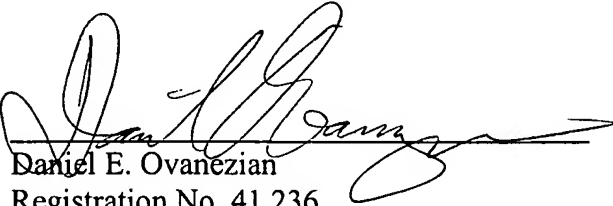
If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Daniel Ovanezian at (408) 720-8300.

If there are any additional charges, please charge our Deposit Account No. 02-2666.

Respectfully submitted,

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Dated: 6/18, 2008


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